

1 **WHAT IS CLAIMED IS:**

2 1. A method comprising:
3 advertising a policy having one or more of assertions characterizing
4 communication properties of a destination node, each assertion specifying a
5 communication property supported by the destination node and selectable by a
6 source node to construct a communication protocol for communication with the
7 destination node.

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10 2. A method as recited in claim 1 wherein the advertising operation
11 comprises generating a message including the policy.

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13 3. A method as recited in claim 1, wherein the advertising operation
14 comprises incrementally distributing the policy.

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17 4. A method as recited in claim 1, wherein the advertising operation
18 comprises generating a message including the policy in response to a request for
19 the policy.

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22 5. A method as recited in claim 1 further comprising:
23 grouping two or more of the one or more assertions into a policy expression
24 in the policy;

specifying a relationship between the two or more assertions.

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3 6. A method as recited in claim 1 further comprising specifying a
4 preference for at least one of the plurality of assertions over at least one other of
5 the plurality of assertions in the policy.

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8 7. A method as recited in claim 1 further comprising:
9 grouping two or more of the plurality of assertions into a first policy
10 expression;

11 specifying a first relationship between the two or more assertions in the first
12 policy expression;

13 specifying a second relationship between the first policy expression and at
14 least one other assertion not in the first policy expression.

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17 8. A method as recited in claim 1 further comprising generating an
18 input policy having a plurality of assertions characterizing input communication
19 properties of the destination node and an output policy having a plurality of
20 assertions characterizing output communication properties of the destination node.

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23 9. A method as recited in claim 1, further comprising determining
24 whether a received message conforms to at least one of the plurality of assertions.

10. A method comprising:

1 retrieving a destination node policy having a plurality of policy expressions
2 characterizing communication properties supported by a destination node;
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4 generating a message that conforms to the policy.

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6 11. A method as recited in claim 10, further comprising selecting one of
7 the plurality of policy expressions to be applied during communication with the
8 destination node.

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11 12. A method as recited in claim 10, further comprising determining
12 whether one of the plurality of policy expressions is compatible with a source node
13 policy having a plurality of policy expressions characterizing communication
14 properties supported by a source node.

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17 13. A method as recited in claim 10, wherein the generating operation
18 comprises generating a message including a source node policy having a plurality
19 of policy expressions characterizing communication properties supported by a
20 source node.

1 14. A method as recited in claim 10, wherein the retrieving operation
2 comprises retrieving the destination node policy from a node other than the
3 destination node.

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5 15. A method as recited in claim 10 wherein the retrieving operation
6 comprises receiving the destination node policy incrementally.

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8 16. A method as recited in claim 10, further comprising:
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10 creating a source node policy having a plurality of policy expressions
11 characterizing communication properties supported by a source node;
12 determining whether a received message conforms to at least one of the
13 policy expressions in the source node policy.

1 17. A system comprising:

2 a policy having one or more assertions characterizing communication
3 properties related to a first node; and

4 a policy generator generating the policy in response to a request for the
5 policy.

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8 18. A system as recited in claim 17, wherein the policy specifies an
9 aggregate assertion representing a plurality of other assertions.

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12 19. A system as recited in claim 17, wherein the policy specifies a
13 Boolean relationship between at least two of the one or more assertions.

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16 20. A system as recited in claim 17, wherein the policy specifies a
17 preference value related to a group of at least one of the one or more assertions.

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20 21. A system as recited in claim 17, wherein the policy comprises an
21 input policy having one or more assertions characterizing input communication
22 properties, and an output policy having one or more assertions characterizing
23 output communication properties.

1 22. A system as recited in claim 17, further comprising a policy retriever
2 retrieving a policy having one or more assertions characterizing communication
3 properties related to a second node.
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5 23. A system as recited in claim 17, further comprising a message
6 generator operable to generate a message conforming to a policy having one or
7 more assertions characterizing communication properties related to a second node.
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10 24. A system as recited in claim 17 wherein the policy comprises a
11 uniform resource identifier related to one of the one or more assertions in the
12 policy.
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14 25. A system as recited in claim 17 wherein at least one of the one or
15 more assertions specifies:
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- 17 an integrity algorithm;
- 18 a privacy parameter;
- 19 a communication protocol;
- 20 an audit trail; or
- 21 a message routing path.

1 26. A computer program product encoding a computer program for
2 executing on a computer system a computer process, the computer process
3 comprising:

4 generating a policy specifying a plurality of assertions characterizing
5 properties of a destination node;

6 receiving a message conforming to one or more of the plurality of
7 assertions.

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10 27. A computer program product as recited in claim 26, wherein the
11 generating operation comprises generating an aggregate assertion representing the
12 plurality of assertions.

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14 28. A computer program product as recited in claim 26, further
15 comprising advertising the policy at an advertising node.

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18 29. A computer program product as recited in claim 26, further
19 comprising distributing the policy in response to a request for the policy.

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21 30. A computer program product as recited in claim 26, wherein the
22 generating operation comprises:

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24 creating a group of two or more of the plurality of assertions;

specifying a relationship between two or more assertions in the group.

31. A computer program product as recited in claim 26, wherein the generating operation comprises specifying a preference for at least one of the plurality of assertions over at least one other of the plurality of assertions.

32. A computer program product as recited in claim 26, wherein the generating operation comprises:

creating a group of two or more of the plurality of assertions;
specifying a first relationship between the two or more assertions in the group;
specifying a second relationship between the group of assertions and at least one other assertion not in the group of assertions.

33. A computer program product as recited in recited in claim 26 wherein the generating operation comprises generating an input policy having one or more assertions characterizing input communication properties, and an output policy having one or more assertions characterizing output communication properties.

1 34. A computer program product as recited in claim 26 wherein the
2 generating operation comprises generating a mark-up language document.
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4 35. A computer program product as recited in claim 26, further
5 comprising determining whether the message conforms to at least one of the
6 plurality of assertions.
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1 36. A computer program product encoding a computer program for
2 executing on a computer system a computer process, the computer process
3 comprising:

4 retrieving a destination node policy describing communication properties
5 supported by a destination node;
6 creating a message that conforms to the policy.

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8 37. A computer program product as recited in claim 36, wherein the
9 retrieving operation comprises sending a request to the destination node for the
10 policy.

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13 38. A computer program product as recited in claim 36, wherein the
14 retrieving operation comprises retrieving the policy from a local cache.

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17 39. A computer program product as recited in claim 36, further
18 comprising determining whether the destination node policy is compatible with a
19 source node policy describing communication properties supported by a source
20 node.

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23 40. A computer program product as recited in claim 36, further
24 comprising:

1 comparing a policy expression in the destination node policy with a policy
2 expression in a source node policy, each policy expression comprising one or more
3 assertions specifying communication properties;

4 selecting the policy expression in the destination node policy for
5 communication with the destination node if at least a subset of the assertions in the
6 policy expression in the source node policy matches all of the assertions in the
7 policy expression in the destination node policy.

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10 41. A computer program product as recited in claim 36, wherein the
11 retrieving operation comprises caching the policy in a memory at a source node.

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